VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Amended) A charge coupled device (CCD) imaging apparatus comprising:

a CCD operable in~~for~~ a progressive scanning mode;

a drive pulse switching circuit for generating a CCD read~~drive~~ pulse ~~for said CCD~~ at a first frame rate, and for generating a CCD drive pulse at a second frame rate being n/2 times the first frame rate, n being an integer;

a CCD driver for driving said~~the~~ CCD ~~by converting the CCD drive pulse into a specified voltage~~;

a frame memory for storing an output signal of said CCD in one frame after the CCD read pulse, and for reading out the stored output signal of said CCD n/2 times; and

a camera signal processing circuit for receiving an output signal of said frame memory and performing a ~~specified~~ camera process.~~,~~

~~wherein said drive pulse switching circuit generates a CCD read pulse of the CCD drive pulse at the first frame rate, and generates the CCD drive pulse other than the CCD read pulse at a frame rate (n/2) times as high as the first frame rate, the n being an arbitrary integer, and~~

~~wherein said frame memory stores an output signal of said CCD in one frame right after the CCD read pulse, and repeats to read out the stored output signal of said CCD in one frame (n/2) times.~~

3. (Amended) The CCD imaging apparatus of claim 2, further comprising a first reproduced signal converter being capable of~~for~~ outputting a reproduced signal of said recorder unit ~~selectively at the frame rate (n/2) times~~

~~as high as the first frame rate and~~ at the first and second frame rates~~rate~~.

4. (Amended) The CCD imaging apparatus of claim 3, further comprising:

a viewfinder for displaying ~~a~~an output signal of said camera signal processing circuit; and

a second reproduced signal converter for converting the reproduced signal from said recorder unit to the second frame rate ~~(n/2) times as high as the first frame rate~~, and for outputting the converted signal to said viewfinder.

5. (Amended) The CCD imaging apparatus of claim 1,

wherein, when the first frame rate is below~~lower than~~ a specified number~~frame rate~~, said drive pulse switching circuit generates the CCD read pulse ~~for said CCD~~ at the first frame rate, and generates the CCD drive pulse ~~other than the CCD read pulse~~ at the second frame rate ~~(n/2) times as high as the first frame rate~~, and

wherein, when the first frame rate is below~~lower than~~ the specified number~~frame rate~~, said frame memory stores the output signal of said CCD ~~in one frame right~~ after the CCD read pulse, and ~~repeats to~~ reads out the stored output signal of said CCD ~~in one frame~~ ~~(~~n/2~~)~~ times.

6. (Amended) The CCD imaging apparatus of claim 5, wherein the specified number~~frame rate~~ is 30 frames/sec.

7. (Amended) The CCD imaging apparatus of claim 6, wherein the first frame rate is~~can be set at~~ 24 frames/sec, 25 frames/sec, or~~and~~ 30 frames/sec, and ~~the~~ n is 2.

8. (Amended) The CCD imaging apparatus of claim 1,

wherein said drive pulse switching circuit includes a frame rate

equalizing controller for enablingmaking said CCD to output both a signal of the first frame rate and a signal of a thirdsecond frame rate at the seconda common frame rate, the second frame rate being of a common multiple of the first and thirdsecond frame rates., and wherein said pulse switching circuit generates the other CCD drive pulse than the CCD read pulse for said CCD at the common frame rate.

9. (Amended) The CCD imaging apparatus of claim 8, wherein the secondcommon frame rate iscan be set to 60 frames/sec orand 48 frames/sec.

10. (Amended) The CCD imaging apparatus of claim 9, further comprising a recorder unit for recording a signal from said camera signal processing circuit at the first and thirdsecond frame rates.

11. (Amended) The CCD imaging apparatus of claim 10, wherein said recorder unit reproduces a signal at the secondcommon frame rate.

12. (Amended) The CCD imaging apparatus of claim 10, further comprising a first reproduced signal converting circuit for issuing a reproduced signal of said recorder unit selectively at the frame rate (n/2) times as high as the first frame rate and at the first and second frame ratesrate.

14. (Amended) The CCD imaging apparatus of claim 1,

wherein said CCD is of a multiple frame interline transfer (MFIT) type for reading out a progressive scanning signal divided into an odd line field and an even line fieldfields,

wherein said frame memory outputs the signal in one frame in a segment frame (SF) format by dividing the signal into an odd line field and an even line field fields,

wherein said drive pulse switching circuit comprises a read field controller for generating a CCD drive pulse to control an order of signals in

the odd and even fields being output from said CCD, and for

~~wherein said read field controller changes~~ changing the order of ~~the signals in~~ the odd and even fields ~~from said CCD~~ every one frame when ~~the~~ n is an odd number at every frame.~~, and~~

~~wherein said read field controller does not change the order of the signals in the odd and even fields from said CCD when the n is an even number.~~

15. (Amended) A charge coupled device (CCD) imaging apparatus comprising:

a CCD operable in~~for~~ a progressive scanning mode;

a drive pulse switching circuit for generating a CCD read~~drive~~ pulse ~~for said CCD~~ at a first frame rate, and for generating a CCD drive pulse at a second frame rate being n/2 times the first frame rate, n being an integer;

a CCD driver for driving said CCD ~~by converting the CCD drive pulse into a specified voltage~~;

a camera signal processing circuit for receiving an output signal of said CCD and performing a ~~specified~~ camera process;

a first frame memory for storing a first signal issued from said camera signal processing circuit in one frame after the CCD read pulse, and for reading out the stored first signal at a frame rate of the first signal n/2 times; and

a second frame memory for storing the first signal and reading out the stored first signal at the first frame rate, a reading out period of the first signal being n/2 frames.~~,~~

~~wherein said drive pulse switching circuit generates a CCD read pulse~~

~~of the CCD drive pulse at the first frame rate, and generates the CCD drive pulse other than the CCD read pulse at a frame rate (n/2) times as high as the first frame rate, the n being an arbitrary integer,~~

~~said first frame memory stores a signal in one frame of the first signal issued from said camera signal processing circuit right after the CCD read pulse, and repeats to read out the stored first signal (n/2) times, and~~

~~said second frame memory stores the first signals, and read out the stored first signal during a period of (n/2) frames.~~

16. (Amended) The CCD imaging apparatus of claim 15, wherein said second frame memory increases a number of samples in a horizontal blanking period of the first signal~~, and reads out the first signal during the period of (n/2) frames~~.

17. (Amended) The CCD imaging apparatus of claim 15, further comprising a recorder unit for recording and reproducing a signal issued from said second frame memory at a rate of the signal issued from said second frame memory.

19. (Amended) The CCD imaging apparatus of claim 15,

wherein, when the first frame rate is below~~lower than~~ a specified number~~frame rate~~, said drive pulse switching circuit generates the CCD read pulse~~ for said CCD~~ at the first frame rate, and generates the CCD drive pulse ~~other than the CCD read pulse~~ at the second frame rate~~ (n/2) times as high as the first frame rate~~,

wherein, when the first frame rate is below~~lower than~~ the specified number~~frame rate~~, said first frame memory stores the first signal, and ~~repeats to~~ reads~~read~~ out the stored first signal ~~(~~n/2~~)~~ times, and

wherein, when the first frame rate is below~~lower than~~ the specified number~~frame rate~~, said second frame memory stores the first signal, and the

read ~~reads~~ out period of the ~~stored~~ first signal is~~during a period of~~ ~~(~~n/2~~)~~ frames.

20. (Amended) The CCD imaging apparatus of claim 19, wherein the specified number~~frame rate~~ is 30 frames/sec.

21. (Amended) The CCD imaging apparatus of claim 20, wherein the first frame rate is~~can be set at~~ 24 frames/sec, 25 frames/sec, or~~and~~ 30 frames/sec, and ~~the~~ n is 4.

22. (Amended) The CCD imaging apparatus of claim 15~~14~~, further comprising a first reproduced signal converter being capable of~~for~~ issuing a reproduced signal of said recorder unit ~~selectively at the frame rate (n/2) times as high as the first frame rate and~~ at the first and second frame rates~~rate~~.

23. (Amended) The CCD imaging apparatus of claim 22, further comprising a second reproduced signal converter for converting a reproduced signal of said recorder unit to ~~a signal of~~ the second frame rate ~~(n/2) times as high as the first frame rate~~, and

a switching circuit for ~~selectively~~ issuing outputs of said first frame memory and said second reproduced signal converter.

24. (Amended) The CCD imaging apparatus of claim 15~~14~~, further comprising a power on/off circuit for turning off said camera signal processing circuit while~~except a period when~~ said camera signal processing circuit does not output~~outputs~~ the first signal.